CASIO FX-602P Simulator

User Manual

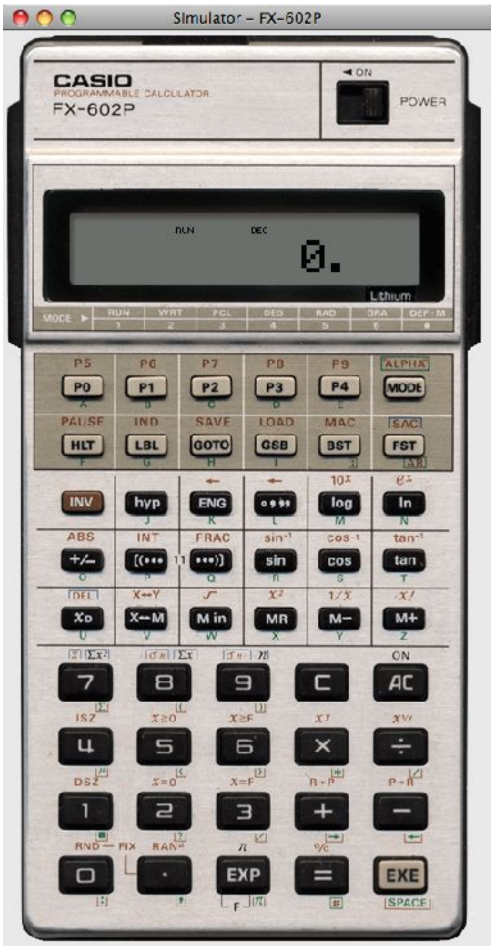
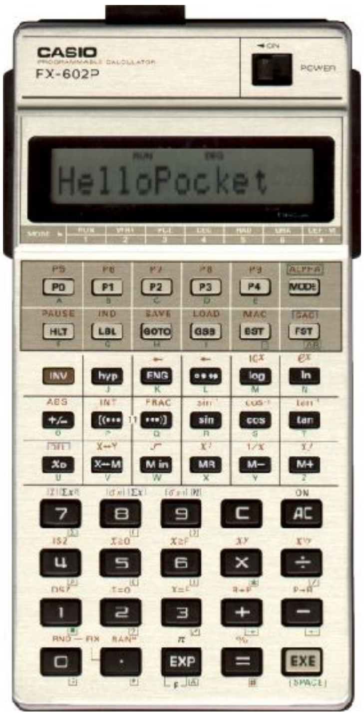


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1 Introduction

The CASIO FX-602P Simulator is a fully functional simulator if the classic CASIO FX-602P programmable calculator and the FA-1 Tape interface.



Picture 1: FX-602P

The Simulator supports all mathematical and statistical functions of the original FX-602P.

The mathematical functions are implemented using a powerful 18 digits BCD floating point library and precision generally exceeds those of Java doubles or the original FX-602P. All numbers are rounded to 10 digits before display.

The FX-602P Simulators is fully programmable just as the original was. All features including indirect addressing or alphanumeric display are implemented.

Memory wise the Simulator even exceeds the original Calculator: The amount of available program steps has been raised from 512 to 999 and the amount of memory register can freely chosen between 11 and 110 – without loosing any program steps.

Program steps and memory register saved when the simulation ends or goes to sleep.

The FX-602P Simulator also simulates the FA-2 cassette interface. Of course instead of saving program steps and memory register to a cassette tape (using the Kansas-City-Standard) the data is stored in permanent memory (hard drive, flash memory) on the host computer.



Picture 2: FA-2 Tape Interface

Care has been taken to use the same file format as it was used with the original Calculator. Using a program which converts Kansas- City-Standard sound into normal files it should be possible to exchange programs between an original FX-602P and the FX-602P Simulator.

2 Installation

2.1 Android OS



Installation is usually performed by an installation tool from the Android-Market. Use this. The various Android application marketplaces allow only for the distribution of the Android application itself. Please contact me with your purchasing information if your are interested in the desktop companion or the source code.

2.2 Symbian OS



Copy the “Mobile” jar file onto your phone phone. Select the file using the Symbian's file manager. The installation process will start automatic.

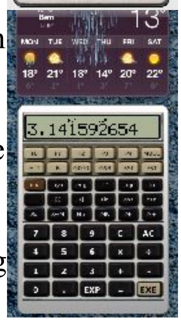
2.3 Mac OS X

2.3.1 Desktop Application



Open the downloaded DMG file then drag and drop the application into the Application folder. If you don't have administrator right any other folder will do as well. Optional you can drag and drop the icon to the Dock as well.

2.3.2 Dashboard Widget



Double clicking the Dashboard widget will install and start the widget. You can then try it out and decide if you want to keep it.

If you want to read and write programs from the Widget you need to authorise the Widget – otherwise Java security will block the attempt.

For this create a file called “**.java.policy** in your home directory with the following 7 lines in them:

```
grant codeBase "file:///Users/username/Library/Widgets/FX-602P.wdgt/FX-602P-Applet.jar" {
permission java.security.AllPermission;
};

grant codeBase "file:///Library/Widgets/FX-602P.wdgt/FX-602P-Applet.jar" {
permission java.security.AllPermission;
};
```

Replace **username** with your own user name.

2.4 Other Operating Systems



Install a Jave-Runtime-Environment if you have not done so already. You can get a JRE for MS-Wndows, Linux and Solaris from http://java.com/download/manual.jsp.

Copy the “Desktop” jar file anywhere you like. Check your operating systems documentation on how to start a jar. With most modern desktop environments (including MS-Windows) a double click on the jar's icon will do.



3 De-Installation

3.1 Android OS

3.2 Symbian OS

The application can be de-installed like any other application on Symbian OS.

3.3 Mac OS X

3.3.1 Desktop Application

Just drag and drop the application into the trash can.

3.3.2 Dashboard Widget

De-install the widget using the widget manager.

3.4 Other Operating Systems

Just delete the Jar file

4 FA-2 Cassette Interface

The FX-602P Simulator comes with an build in Simulation of the FA-2 Cassette Interface which is used just like the original – only the programs and data is saved as normal files normal files inside a normal directory. Note that all files need to be in the same directory – the Simulator has no concept of subdirectories.

The needed directory is automatically created on first use. Don't delete it!

4.1 Android OS

On Android there are two options open to save your programs and data: Local and sd-card.

Local
: The files are stored locally in the phone. The application can be used when the sd-card is removed or is mounted via USB. However, you can not copy your files to the desktop and the files will be deleted when you de-install the software.

sc-card
: The data is stored on the sd-card. You can use SAVE and LOAD when the sd-card is not available but you can copy simulator data from and to the sd-card to exchange them with the desktop companion.

4.2 Symbian OS

On Symbian OS there are two options open to save your programs and data: Record I/O and File I/O.

Record I/O
: The data is stored inside the JavaME internal database. This is considered a save operation. However the Data cannot be accessed outside JavaME.

File I/O
: The Data is stored as normal files in “D:\other\FX-602P\”. Java ME considers access to the file system a potential security risk and will ask permission each and every time such an access takes place. Try installing the MIDlet permissions changer[1] to allow file access permanently.

Note that the data is not copied when you switch locations.

4.3 Mac OS X

On Mac OS X the programs and data are stored as normal files in “`/Users/`**`username`**`/FX-602P/`” with **username** being your own user name.

4.4 MS-Windows

On Windows the programs and data are stored as normal files in “`C:\Documents and Settings\`**`username\`**`FX-602P\`”[2] before Vista and in .“`C:\Users\`**`username`**`\FX-602P\`” in Vista and beyond.

1 http://101swmail010.googlepages.com/uiq3mods

2 Actually the system property “"`user.home`" is used to determine the correct home directory even when your computer uses a non standard set-up.

4.5 Unix

On Unix systems the programs and data are stored as normal files in “`/home/`**`username`**`/FX-602P/`”.

5 Tips and Tricks

5.1 All Operating systems

5.1.1 Support

For support turn to the FX-602P Forum for News to the FX-602P Blog.

5.1.2 Download an original Manual

To make the most of your FX-602P Simulator you should download a copy of the original manual. There are two version available in English / Spanish or French / German. Both a PDF and about 14 MB in size.

The german manual of the FA-2 Cassette interface (pdf, 1.3 MB) and FP10 thermal printer (pdf, 0.5 MB) are also available.

And you can download the original program library (pdf, 35.2 MB) again in german.

5.1.3 Calculator Modes

The FX-602P hat six calculator modes which are activated by pressing `MODE` plus a numeric key from `1` to `6` or a `•`:

Key	Name	Description
`1`	`RUN`	Normal operation and running programs.
`2`	`WRT`	Write a program.
`3`	`PCL`	Program clear. Also `SAVE` and `LOAD` programs.
`4`	`DEG`	Trigonometric functions done in degree (0…360°).
`5`	`RAD`	Trigonometric functions done in radians (0…2π).
`6`	`GRA`	Trigonometric functions done on gradients (0…400°).
`•`	DEF•M	Define memory. You can defined the memory between 10 memory register to 100 memory register. Unlike the original calculator you don't need to trade programming steps for memory. `MODE` `••` shows the current setup. `MODE` `•00` set the maximum of 100 memory register. With `MODE` `•10` you need only two as opposed to three key strokes per memory operation.

5.2 Android OS

5.2.1 Backup

The FX-602P Simulator supports the new backup framework with came with Android 2.2 «Froyo». This will backup your data automatically to an on-line service. Which on-line service depends on your network provider. You can switch the backup off to preserve your contingent of network traffic.

5.3 Symbian OS

5.3.1 Deactivate the D-Pad

without the dPad the larger more realistic display is used. You can do that in Settings -> Application Mgr. -> Installed Apps -> FX 602P Simulator -> Options -> Suite Settings -> On Screen Keyboard -> Off.

5.3.2 Exit the application

Use the the red key.

5.3.3 Open Settings

Click the left half of the display.

5.3.4 Open Printout

Click the right half of the display.

5.3.5 Switch on after auto power off

Click the display.